

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-21 are canceled.

22.(currently amended) A top spin-valve giant magnetoresistive (GMR) SyAP read head having a novel conductive lead overlay configuration, comprising:

a substrate on which is formed a dielectric layer;

a seed layer formed on said dielectric layer;

a ferromagnetic free layer form[[ing]]ed on the seed layer;

a metallic, non-magnetic spacer layer formed on the ferromagnetic free layer;

a synthetic antiferromagnetic pinned layer (SyAP) formed on the spacer layer,

said layer further comprising:

a first ferromagnetic layer, AP1;

a metallic, non-magnetic coupling layer formed on said first ferromagnetic layer;

a second ferromagnetic layer, AP2, formed on the metallic, non-magnetic coupling layer;

an antiferromagnetic pinning layer formed on said SyAP layer;

a first capping layer formed on said antiferromagnetic pinning layer[[;]] , forming thereby a layered top spin-valve sensor element; and

the opposite lateral edges of said layered configuration being shaped to form a substantially vertical second side region, a substantially vertical first side region distal to said second side region and a horizontal region extending between said first and second side regions, said regions being covered by said first capping layer; and

a longitudinal hard magnetic bias layer formed [[as]] in a contiguous junction against [[a]] said first side portion region of said sensor element, said bias layer being covered by a second capping layer;

a conducting lead layer, formed overlaying over said longitudinal hard magnetic bias layer [[and]] said lead layer electrically contacting [[a]] said horizontal region and said second side portion region of said sensor element and forming, thereby, a lead overlay configuration.

Claims 23-34 are canceled.

35.(currently amended) The structure of claim 22 wherein the first side portion extends vertically from a position between said metallic non-magnetic coupling layer [[to]] and said metallic, non-magnetic spacer layer [[and]] to the substrate.

36.(original) The structure of claim 22 wherein the conducting lead layer is a triple layer comprising a first layer of Ta, formed to a thickness of between approximately 20 and 60 angstroms on which is formed a layer of Au, of thickness between approximately

100 and 500 angstroms, on which is formed a second layer of Ta, to a thickness of between approximately 20 and 60 angstroms.

37.(original) The structure of claim 22 wherein the conducting lead layer is a laminated layer comprising layers of conducting material chosen from the group consisting of Au, Ag, Ta, Rh, Ir, and Ru.

38.(currently amended) The structure of claim 22 wherein said second side portion extends vertically from the capping layer, through said AP2 layer to a point between said metallic non-magnetic coupling layer and said metallic, non-magnetic spacer layer the upper surface of the longitudinal magnetic bias layer.

COMMENTS

Claim 38 has been amended to include the proper status identification “currently amended.” Applicants believe that the amendment document filed on 3/14/05 is now properly compliant.

If the Examiner has any questions regarding the above application, please call the undersigned attorney at 845-452-5863

Respectfully submitted,



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